



May 14, 2009

## **Province supports nine innovative energy projects**

*Edmonton...* The Government of Alberta is strengthening its commitment to establishing the province as a world-class centre for responsible energy development through funding for nine innovative energy projects.

“Alberta is once again demonstrating global leadership in the advancement of innovative energy technologies,” says Energy Minister Mel Knight. “This investment in Alberta’s future is a clear indicator that this government will continue to take positive steps to position Alberta as a science, technology, and clean energy leader.”

The approved projects were submitted by ARC Resources Ltd., EnCana Corporation, Husky Oil, Imperial Oil, Laracina Energy, and Pengrowth Corporation. Using a variety of test products, including inert gas, polymers, acid gas and carbon dioxide, these initiatives could result in enhanced recovery techniques to reach previously inaccessible oil and gas deposits. Some of the projects will also examine ways to reduce water use and increase storage of CO<sub>2</sub>.

The projects will receive royalty adjustments totalling up to \$41.5 million under the third round of Alberta Energy’s *Innovative Energy Technologies Program (IETP)*. This is in addition to 16 projects previously announced.

The IETP offers royalty adjustments of up to \$10 million per pilot project that demonstrates new or innovative technologies to increase environmentally sound recoveries of existing reserves and encourages responsible development of new oil, natural gas and in situ bitumen reserves. The total program value in terms of royalty adjustments is \$200 million over five years.

Under the terms and conditions of Project Approvals and Intellectual Property Agreements, the Government of Alberta expects that the technology supported with funding from this program will be made widely available so that the successful new recovery techniques may be used by others in the energy sector.

The IETP supports the initiative in the Minister’s mandate letter to support research on new oil sands practices and the goal of the Provincial Energy Strategy to encourage clean energy development.

For project descriptions and additional information on the IETP go to:

<http://www.energy.alberta.ca/Oil/768.asp>

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**Attachment:** Backgrounder with additional details on the IETP and project summaries.

**Media inquiries may be directed to:**

Tim Markle, Communications

Alberta Energy  
(780) 427-0479

To call toll free within Alberta dial 310-0000.

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## **Innovative strategies benefit generations of Albertans**

The Energy Innovation Strategy responds to the future energy needs of Alberta by investing in research, technology and innovation that create commercial value and achieve high environmental standards. The Innovative Energy Technologies Program (IETP) is the major component of this strategy.

The IETP is a \$200-million commitment over five years by Alberta Energy to provide royalty adjustments to a number of specific pilot and demonstration projects that use innovative technologies to increase recoveries from existing reserves and encourage responsible, development of oil, natural gas and in situ oil sands reserves.

The program objectives are:

- increasing the recovery from oil and gas deposits resulting in incremental production and royalties;
- finding a flexible commercial technical solution to the gas over bitumen issue that will allow efficient and orderly production of both resources - for more information go to <http://www.energy.alberta.ca/OilSands/578.asp>;
- improving the recovery of bitumen resources by in situ technologies;
- improving recovery of natural gas from coal seams; and,
- disseminating technology and information developed through the projects supported by this program.

Successful applicants in the program are provided with a royalty adjustment of up to 30 per cent of approved project costs. Industry must provide 70 per cent or more of total project costs. Under the terms of the IETP, successful applicants must submit the following reports:

- annual and final technical reports; and,
- annual and final intellectual property reports on any new technology developed through an IETP project.

It is anticipated that successful technologies supported by this program will enhance resource recovery and increase royalties to fully recover, over time, the program costs.

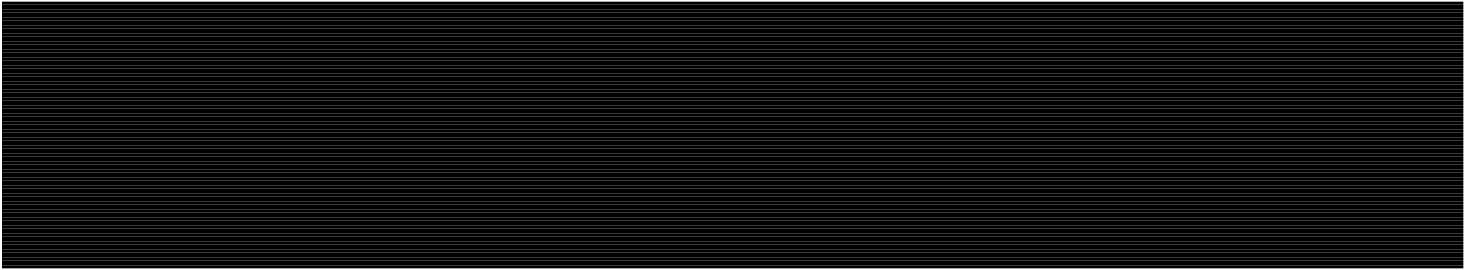
To view a complete list of successful projects as well as additional information on the IETP go to: <http://www.energy.alberta.ca/Oil/768.asp>.

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## **Innovative Energy Technologies Program Successful Round Three Projects and Applicant Contacts**

### **ARC Resources Ltd.**

Project Title: Redwater Immiscible CO2 Vertical Pilot Project

Location: Approximately 10 kms north of Fort Saskatchewan

Amount Approved under IETP: \$7,560,000

#### *Project Summary:*

This pilot will test the efficiency of conventional oil recovery by gravity-assisted inert gas (a gas which will not mix with oil) injection. The primary objective of the pilot is to investigate the technical and economic feasibility of recovering conventional oil by injecting immiscible CO2 into a pool that has been water-flooded by an active natural water drive.

Contact: William Sawchuk Phone: 403-509-7287

### **EnCana Corporation**

Project Title: Deep Basin Development and Measurement of Marginal Zones

Location: Encana's Bighorn Area near Grande Cache

Amount Approved under IETP: \$5,000,000

#### *Project Summary:*

EnCana is currently working to increase reserves from existing natural gas reservoirs in marginal zones and understanding zonal performance in the deep basin. They hope to achieve this by using techniques to stimulate the marginal zones and then, using innovative technologies, measure the performance of the marginal zones and determine if they are economical to produce.

Contact: Dean Jenkins Phone: 403-645-8985

### **EnCana Corporation**

Project Title: Deep Tight Gas Horizontal Well Stimulation

Location: Encana's Bighorn Area near Grande Cache

Amount Approved under IETP: \$1,830,000

#### *Project Summary:*

The deep geological formation known as the Fahler is one of Alberta's unconventional natural gas reserves of the future with an estimated gas in place of up to 400 trillion cubic feet. Encana is testing the viability of drilling horizontal wells in the Fahler and completing the zone with innovative techniques to increase recovery.

Contact: Dean Jenkins Phone: 403-645-8985

### **EnCana Corporation**

Project Title: Suffield Conventional Heavy Oil Chemical Flood

Location: Suffield Upper Mannville UU Pool

Amount Approved under IETP: \$1,550,000

#### *Project Summary:*

This project will determine if it is technically and economically feasible to use an Alkaline-Surfactant-Polymer (ASP) flood in a heavy conventional oil pool. Surfactant is any chemical that, when added to water, will reduce the surface tension of water. This enables the water to mix with materials it would otherwise not mix with, such as oil. This project will also determine if an ASP flood using saline water can be implemented without expensive and energy-intensive water treatment necessary when using fresh water.

Contact: Brad Small Phone: 403-645-8387

### **Husky Oil Operations Ltd.**

Project Title: Advanced Alkali-Surfactant-Polymer (ASP) Process Using Surfactants Derived from Renewable Natural Resources

Location: Taber Field - Glauconitic K Pool - Township-Range: 9-16W4

Amount Approved under IETP: \$5,000,000

#### *Project Summary:*

Husky is proposing to implement the first Alkali-Surfactant-Polymer (ASP) flood in Canada using surfactants derived from renewable natural resources. This new surfactant combination is renewable, environmentally friendly, bio-degradable, and reduces the use of petroleum based products in the ASP system. If successful, this new ASP process could increase incremental oil recovery from a mature, water-flooded property by approximately 10 per cent over the conventional system using petroleum-based surfactant.

Contact: Graham White Phone: 403-298-7088

### **Husky Oil Operations Ltd.**

Project Title: Rainbow Keg River O Pool Enhanced Gas Recovery

Location: Rainbow Lake (located approximately 132 km west of High Level)

Amount Approved under IETP: \$2,700,000

#### *Project Summary:*

Traditionally, energy producers recover only 65 to 85 per cent of the original gas in reservoirs before the reserve is considered "depleted" due to low reservoir pressure or water influx reducing productivity. Injecting acid gas to increase reservoir pressure and displace hydrocarbons to a production well may provide significant incremental hydrocarbon recovery, while sequestering large volumes of CO<sub>2</sub> and H<sub>2</sub>S (hydrogen sulphide) gas within depleted hydrocarbon reservoirs. It is anticipated that up to 20 per cent of the residual gas may be recovered through this process.

Contact: Brian Hunter Phone: 403-298-7401

### **Imperial Oil Resources**

Project Title: Cold Lake Solvent Assisted - SAGD Pilot

Location: Cold Lake Mahkeses

Amount Approved under IETP: \$10,000,000

#### *Project Summary:*

The Solvent-Assisted Steam-Assisted Gravity Drainage (SA-SAGD) process is aimed at improving SAGD performance by adding solvent to the steam. Laboratory experimental results

indicate this process results in increased bitumen recovery and reduces the energy consumed in the extraction process by decreasing steam-to-oil ratios.

Contact: Pius J. Rolheiser Phone: 403-237-2663

### **Laricina Energy Ltd.**

Project Title: Saleski Oil Sands Pilot Project - Phase 1

Location: Athabasca Grosmont formation

Amount Approved under IETP: \$4,300,000

#### *Project Summary:*

This project is to demonstrate steam-assisted gravity drainage (SAGD) bitumen recovery in the Grosmont Formation which contains an estimated 300 billion barrels of bitumen. Phase 1 of the project includes lab studies, acquiring 3D seismic data, demonstrating the technical feasibility and cost effectiveness of drilling horizontal SAGD well pairs within the Grosmont zones; and evaluating the performance of a cold-solvent recovery process. Phase two of this pilot project is to demonstrate SAGD bitumen recovery in the Grosmont carbonate reservoir. On a global basis, it's estimated that carbonate reservoirs hold around 60 per cent of the world's oil and 40 per cent of the world's gas. Traditional recovery tends to be low from these fields.

Contact: Deepa Thomas Phone: 403-750-7093

### **Pengrowth Corporation**

Project Title: Quaternary Acid Gas Injection at Judy Creek BHL 'A' Pool

Location: Judy Creek Beaverhill Lake (BHL) 'A' Pool.

Amount Approved under IETP: \$3,540,000

#### *Project Summary:*

This pilot plan calls for injecting carbon dioxide (CO<sub>2</sub>) rich acid gas in a WAG (water alternating gas - alternating monthly cycles of CO<sub>2</sub> and water) mode lasting about one and a half years, followed by monitoring and evaluation for another year. If successful, Pengrowth expects to recover about two per cent of the original oil in-place over two and a half years of this pilot operation.

Contact: Rob Moriyama Phone: 403-508-8934

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